PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
J00040367WO		

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB99/01661	26/05/1999	26/05/1998

International Patent Classification (IPC) or national classification and IPC
H04Q3/00

Applicant
BRITISH TELECOMMUNICATIONS PLC et al.

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 9 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

I	☒	Basis of the report
II	☐	Priority
III	☐	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	☐	Lack of unity of invention
V	☒	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
VI	☐	Certain documents cited
VII	☒	Certain defects in the international application
VIII	☐	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17/12/1999	13.10.2000

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Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/01661

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-25   as originally filed

Claims, No.:

1-19   as originally filed

Drawings, sheets:

1/8-8/8   as originally filed

2. The amendments have resulted in the cancellation of:

☐   the description,   pages:

☐   the claims,   Nos.:

☐   the drawings,   sheets:

3. ☐   This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-19
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-19
Industrial applicability (IA)	Yes:	Claims	1-19
	No:	Claims	

2. Citations and explanations

   see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

   see separate sheet

With respect to item V

1   The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1:   HELLEMANS P ET AL.: 'TINA Service Architecture: From Specification to Implementation' PROCEEDINGS TINA'97 - GLOBAL CONVERGENCE OF TELECOMMUNICATIONS AND DISTRIBUTED OBJECT COMPUTING, 17 - 20 November 1997, pages 174-183, XP002082032 SANTIAGO (CL)

D2:   ABARCA C ET AL: 'Network Resource Architecture (Version 3.0)' 10 February 1997 (1997-02-10) , TELECOMMUNICATIONS INFORMATION NETWORKING ARCHITECTURE CONSORTIUM , HTTP://WWW.TINAC.COM XP002082942

D3:   PAVON J ET AL.: 'The VITAL Network Resource Architecture' PROCEEDINGS TINA'97 - GLOBAL CONVERGENCE OF TELECOMMUNICATIONS AND DISTRIBUTED OBJECT COMPUTING, 17 - 20 November 1997, pages 130-138, XP002082940 SANTIAGO (CL)

2   The document **D1** is considered to represent the closest prior art to the subject matter of **claim 1** (cp. chapter 5, page 178). It is part of the proceedings of an IEEE conference and describes aspects of the VITAL project. It discloses according to features of present claim 1,

a communications service provision support system which supports multiple different types of services during service sessions (chapter 5.2, 1st paragraph),

said system when in use comprising a session manager which performs functions generic to each of said multiple different types of services during service sessions (page 180, left hand column, line 7-13).

The communications service provision support system disclosed by the present claim 1 differs from that known system in that the session manager generates event messages during service sessions indicating changes of the status of

individual users. According to the description, these messages are primarily used for service accounting.

The document D1 describes a way of implementing the TINA architecture. TINA is an architectural approach for object oriented modelling of telecommunication networks.

The document D2 describes basic principles of TINA for control and management of network resources. It discloses among other things a method of event-driven accounting. The basis for that accounting are accountable objects. These objects are able to generate accounting events. The events can be directed e.g. to a metering manager which is processing them e.g. by filtering and logging (cp. page 7-148, chapter 7.4.4; page 7-149, chapter 7.4.5; page 7-152, chapter 7.5.3). Thus, it is obvious for a person skilled in the art, to apply this principle also to a session manager as disclosed by D1, especially because D1 is also related to the TINA approach. This would result into a session manager which generates events related to states of user sessions (since these are obviously the objects handled by a session manager). The term "event-handler" is vague and denotes an entity (e.g. a program or a circuitry) which is able to process the said event message any way. The metering manager mentioned in D2 can also be considered as an "event handler".

Thus, the subject-matter of claim 1 fails to meet the requirements of article 33(3), PCT because it does not involve an inventive step.

3   The independent **claims 12** describes a method of notifying events according to the service provision support system described in the claims 1-11. There are no additional aspects which would indicate an inventive step. The principle of event-driven accounting has already been disclosed by D2. The application of event-driven accounting to a multi-party service session is rendered obvious by the TINA architecture (see document D2) which is the basis for the VITAL project (see documents D1 and D3).

The subject-matter of claims 12 therefore fails to meet the requirements of Article 33(3), PCT because it lacks an inventive step.

4   The independent **claim 14** is related to a method of generating billing records based upon the event messages indicating the state changes of a participants of a service session.

The document D2 describes the event-driven accounting in the TINA architecture. The model comprises accountable objects which generate accounting events which are sent to a metering manager which performs logging, filtering and pre-processing for the sake of billing. Document D1 describes a session subsystem comprising a session manager offering generic functions for multi-party sessions. As mentioned before, since document D1 is an implementation of the TINA architecture and document D2 is part of the TINA document suite, it is obvious for a person skilled in the art, to apply the TINA accounting principles also to the session sub-system.

The present claim 14 adds an additional aspect to that known method, in that the billing records include a charge indication for an individual participant's participation in a service session derived from changes of the status of other participants of the said session.

The problem to be solved by the current invention can thus be considered as finding a policy for charging of multi-party session services.

However, determination of charges depending on state changes of other participants of a session is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed. Other straightforward possibilities for charging based upon said event message would be e.g. the charging depending on time of event, duration of session participation, etc.

The subject-matter of claim 14 therefore fails to meet the requirements of Article 33(3), PCT because it does not involve an inventive step.

5   Dependent **claims 2-11,13 and 15-19** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step, because they are either known from document D1 or represent, respectively, merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the respective problem posed.

5.1   The dependent **claims 2 and 3** describe the event messages which include at least one message which contains data indicating a discrete change of the status of an individual user session. The document **D3** describes further details of the VITAL project and is part of the same conference proceedings as document D1. It discloses the usage of event messages indicating state changes of accountable resources (page 135, right-hand column, line 6-9).

5.2   Dependent **claims 4 and 13** specify a list of state changes of a service session. The document D1 discloses a session system including a session manager and a number of service primitives used for session control (cp. page 177). As mentioned above, event-based accounting management applied to a service session according to the TINA architecture would generate event messages for each of those service session state changes accordingly.

Thus, the subject-matter of claim 4 could not be considered as involving an inventive step (Article 33(3), PCT), even if the disclosed set of service primitives used for session control and state changes corresponding to these service primitives is slightly different from the set disclosed by D1.

5.3   The dependent **claim 5** discloses the generation of a predetermined set of event messages for each of a plurality of different types of services. The subject-matter of this claim is substantially the same as the subject-matter of the preceding claims 1 and 4, i.e. the session manager provides generic functionality to a variety of services. As mentioned before, a generic session manager is disclosed by D1, the principle of event driven accounting is disclosed by D2.

5.4   The dependent **claims 6-11** deal with functional aspects of the event handler. The document D2 discloses the basic principles of event-driven accounting. A metering manager is used for processing the event messages originated from accountable objects. The said metering manager measures the usage of resources based on the received event messages and is thus a prerequisite for further evaluation, e.g. user pricing and service provider costing. Such evaluations like pricing and costing are obvious applications of the said service usage measurements according to the business model including user, service provider and retailer.

Statistical evaluation is also an obvious application of service usage data.

Multiplying of event messages is a functionality which has already been employed for the event-driven accounting disclosed in document D2 (cp. page 7-173, last paragraph).

5.5   The dependent **claims 15-18** describe additional criteria for computation of charges. These variants can, even if not explicitly mentioned by prior art, not be considered as being inventive since they represent merely one of several straight-forward possibilities of session charging (see above).

5.6   The dependent **claim 19** discloses a system or method according to any preceding claim where at least three participants are involved into a service session. The session system of VITAL disclosed in D1 allows also sessions with at least three parties (cp. page 179, chapter 5.2; page 181, chapter 5.3).

5.7   The subject-matters of dependent **claims 2-11, 13 and 15-19** are therefore not based on an inventive step (Article 33(3) PCT).

With respect to item VII

The independent claims are not in the two-part form recommended by Rule 6.3(b) PCT having a pre-characterizing portion which correctly reflects the prior art of documents D1 and D2 (see the comments regarding the independent claims in section V of this preliminary examination report) .

The opening part of the description does not take the relevant backround art disclosed in documents D1, D2 and D3 into account (Rule 5.1 a) ii) and iii) PCT).

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).